## ■ MIG Contents

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## 2. M3 T MC-6700S Specification

| No. | Feature | Specification |
|---|---|---|
| 1 | **Model Name** | MC-6700S |
| 2 | **CPU** | PXA320 806MHz |
| 3 | **OS** | Windows CE 5.0 |
| 4 | **RAM** | 256MB |
| 5 | **ROM** | 256MB(up to 512MB) |
| 6 | **Dimension (W x H x D)** | 77 x 168.8 x 28 mm (including std. battery)<br>77 x 168.8 x 34.5 mm (including ext. battery) |
| 7 | **Weight** | 378g / 13.3oz (including std.battery)<br>424g / 14.9oz (including ext.battery) |
| 8 | **Display** | 3.5" QVGA, TFT Type |
| 9 | **WLAN** | 802.11 b/g, 802.11 a/b/g |
| 10 | **Scanner** | 1D Laser / 2D Imager |
| 11 | **Camera** | 3.0M pixels AF |
| 12 | **Bluetooth** | Class II V2.0 with EDR(Enhanced Data Rate) |
| 13 | **GPS** | Integrated GPS |
| 14 | **I/O** | Microphone/Speaker/Stereo Ear-mic Jack,<br>USB Host 1.1/USB Client 1.1/External Serial/Ethernet(via Cradle) |
| 15 | **LED** | Modem, Scanner, Charging/Battery Status |
| 16 | **Battery** | Rechargeable Lithium polymer 2,700mA/h (Standarad)<br>Rechargeable Lithium Ion 4,800mA/h (Extended) |
| 17 | **Expansion Slot** | Micro SD card(up to 8G) |
| 18 | **Adaptor** | Input : AC 100~240V, Output: DC 5.2V / 5A |
| 19 | **Temperature** | Operating : -20℃ to 60℃ / -4℉ to 140℉<br>Storage : -30℃ to 70℃ / -22℉ to 158℉ |
| 20 | **Humidity** | 90% non-condensing |
| 21 | **Drop Test** | 1.8m / 6ft. Drop, 2 drops per 6 sides |
| 22 | **IP** | IP65 |

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## 3. M3 T MC-6700S Accessory List (Full Option)

| Image | Feature / Spec. |
|---|---|
| | **- Single Slot Cradle**<br>DC Jack Connector,<br>USB Host/Client, Serial port |
| | **- Single Slot Cradle(Ethernet)**<br>DC Jack Connector, Ethernet<br>USB Host, Serial Port |
| | **- Four Slot Cradle**<br>DC Jack Connector, USB Client |
| | **- Four Slot Cradle(Ethernet)**<br>DC Jack Connector, Ethernet<br>Port |
| | **- Standard Battery**<br>Li-poly 3.7V 2,700mA/h |
| | **- Extended Battery**<br>Li-ion 3.7V 4,800mA/h |
| | **- Vehicle Cradle** |
| | **- Ram Mount** |

| Image | Feature / Spec. |
|---|---|
| | **- Cigar Jack Charging Cable** |
| | **- AC Cord / Adaptor**<br>Input : AC 100V~220V<br>Output : DC 5V / 5A |
| | **- Stylus Pen / String** |
| | **- Ear-phone** |
| | **- USB Cable** |
| | **- Manual CD / Active sync CD** |
| | **- Leather Case** |

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## 4. M3 T MC-6700S Box Package (Full Option)

| Item | | M3 T MC-6700S |
|---|---|---|
| Handset | | 1EA |
| AC Cord | | 1EA |
| Adaptor (5V / 5A) | | 1EA |
| Single Slot Cradle | | 1EA |
| Gift Box | | 1EA |
| Poly Bag | | 7EA |
| Blister Box | | 1EA |
| Ear-phone | | 1EA |
| Stylus Pen | | 3EA |
| Stylus Pen String | | 2EA |
| LCD Protection Tape | | 1EA |
| Battery | Stdandard (Li-poly 2,700mA/h) | 1EA |
| | Extended (Li-ion 4,800mA/h) | 1EA |
| USB Cable | | 1EA |
| CD (Manual CD / Active Sync CD) | | 1EA |
| Quick Manual | | 1EA |

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## 5. Differentiation from competitors : M3 T MC6700S

| Model | | M3MOBILE | MOTOROLA | | INTERMEC | BLUEBIRD |
|---|---|---|---|---|---|---|
| | | M3 T | MC9090-S | MC75 | CN30 | BIP-6000 |
| Image | | | | | | |
| CPU | | PXA320 806MHz | PXA270 624MHz | PXA270 624MHz | PXA272 520MHz | PXA320 806MHz |
| OS | | Win CE 5.0 | Win CE 5.0<br>Windows Mobile 5.0/6.1 | Win CE 5.0<br>Windows Mobile 5.0 / 6.1 | Windows Mobile 5.0 | Win CE 6.0<br>Windows Mobile 6.1 |
| RAM | | 256MB | 64MB(up to 128MB) | 64MB(up to 128MB) | 64MB | 256MB |
| ROM | | 256MB | 128MB | 128MB | 64MB | 521MB |
| Dimension (W x H x D mm) | | 77 x 168.8 x 28<br>(including battery) | 91 x 201 x 56 | 76 x 153 x 37 | 89 x 173 x 34(with 14key)<br>89 x 240 x 34(with 56key) | 80 x 160 x 35.5 |
| Weight | | 363g (including battery) | 567g (WLAN/WPAN) | 314g / 11.2oz.<br>(WLAN/WPAN) | 474g(with 14key)<br>618g(with 56key) | 407g<br>(including battery) |
| DISPLAY | | 3.5 " QVGA | 3.7" QVGA | 3.5" QVGA | 3.7" VGA | 3.5" VGA |
| KEYPAD | | Alpha-numeric | 28-,38-key alpha prime,<br>38-key numeric prime | 26 Numeric, 44QWERTY | 14-key, 56-key | Numeric, QWERTY |
| BATTERY | STD. | Li-polymer 3.7V 2,700mA/h | Li-ion 7.2V 1,550mA/h | Li-ion 3.7V 1,900mA/h,<br>3,600mA/h, 3,800mA/h,<br>4,800mA/h | Li-ion 3.7V 2,400mA/h<br>(with 14key) | Li-ion 3.7V 4,400mA/h |
| | EXT. | Li-ion 3.7V 4,800mA/h | N/A | | Li-ion 3.7V 4,800mA/h<br>(with 56key) | |
| EXPANSION SLOT | | MicroSD card | SD Card | SD Card | SD Card | MiniSD Card |
| WWAN | | N/A | N/A | N/A | N/A | N/A |
| WLAN | | 802.11 b/g, 802.11 a/b/g | 802.11 a/b/g | 802.11 a/b/g | 802.11 b/g | 802.11 b/g |
| SCANNER | | 1D / 2D | 1D / 2D | 1D / 2D | 1D | 1D / 2D |
| CAMERA | | 3.0M pixel AF | N/A | N/A | N/A | 3.0M pixel AF |
| GPS | | Integrated GPS | N/A | N/A | N/A | A-GPS |
| Operation Temp. | | -20℃ ~ 60℃ | -20℃ ~ 50℃ | -10℃ ~ 50℃ | -10℃ ~ 50℃ | -20℃ ~ 55℃ |
| Storage Temp. | | -30℃ ~ 70℃ | -40℃ ~ 70℃ | -40℃ ~ 60℃ | -20℃ ~ 60℃ | -25℃ ~ 70℃ |
| HUMIDITIY | | 90% non-condensing | 95% non-condensing | 95% non-condensing | 95% non-condensing | 95% non-condensing |
| Drop Test | | 1.8m | 1.8m | 1.5m | 1.5m | 1.8m |
| Sealing | | IP65 | IP64 | IP54 | IP54 | IP65 |

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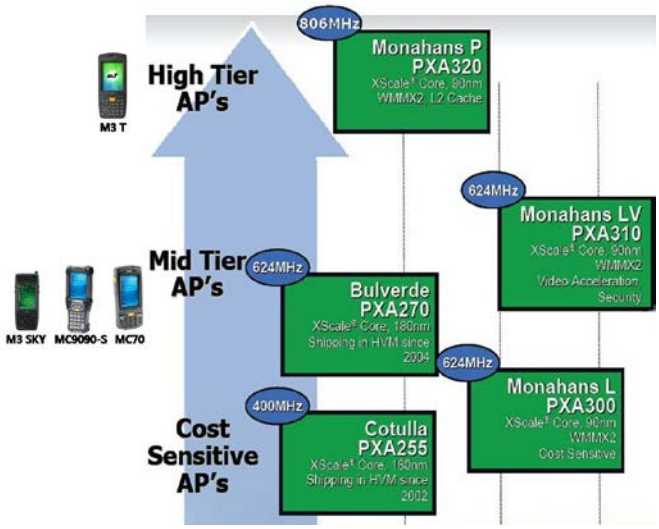
# 5. Differentiation from competitors : M3 T MC6700S

## 5-1. Powerful CPU Performance

### ■ Distinguished CPU technology based on Marvell platform

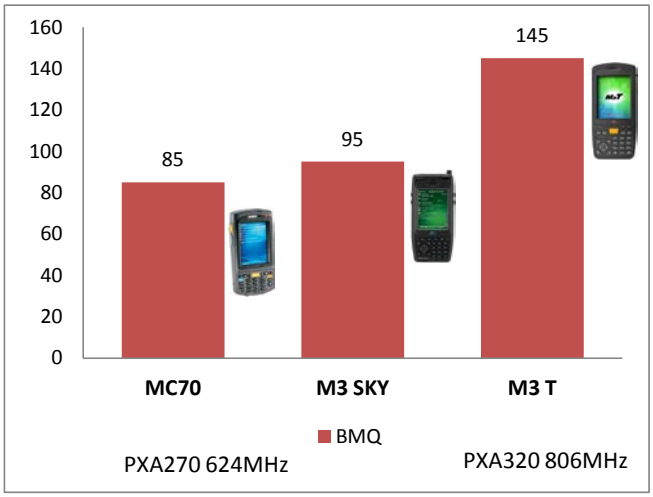
M3 T MC6700S has realized powrful CPU speed with "High-Tier" Mavell PXA320 platform.
M3 T has outstanding CPU performance camparing to competitors models with "Mid-Tier" Mavel PXA270 platform..




**PXA320 Advantages**

| Item | PXA270 | PXA320 |
|---|---|---|
| CPU Core | XScale (ARM9) | XScale (ARM11) |
| CPU Clock (Speed) | 520MHz | 806MHz |
| Internal SRAM | 4(banks) X 64(KB) = 256KB | 6(banks) X 128(KB) = 768KB |

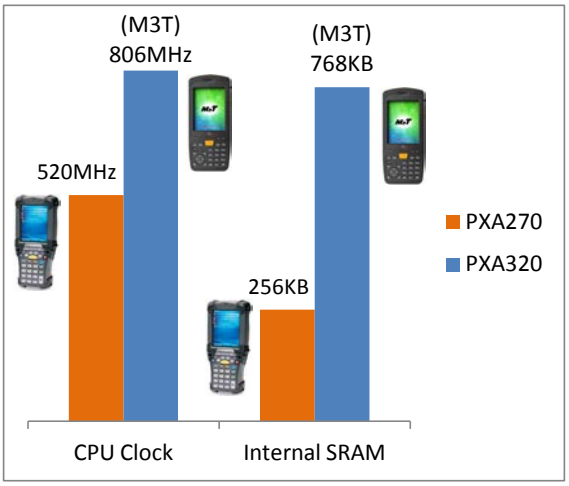
**M3 T CPU BMQ Test Result**




■ BMQ(Bench Marking Quality) Test
: CPU Calculation Speed test and memory access speed Test within 1 second.

■ M3 T with PXA320(806MHz) CPU has 55% enhanced CPU speed comparing to the device with PXA270(520MHz).

**M3 T CPU Clock Speed & Internal SRAM Size**




■ M3 T has installed PXA320(806MHz) with 768KB Internal SRAM in order to speed up the graphic process. With internal SRAM, M3 T can support faster UI display.

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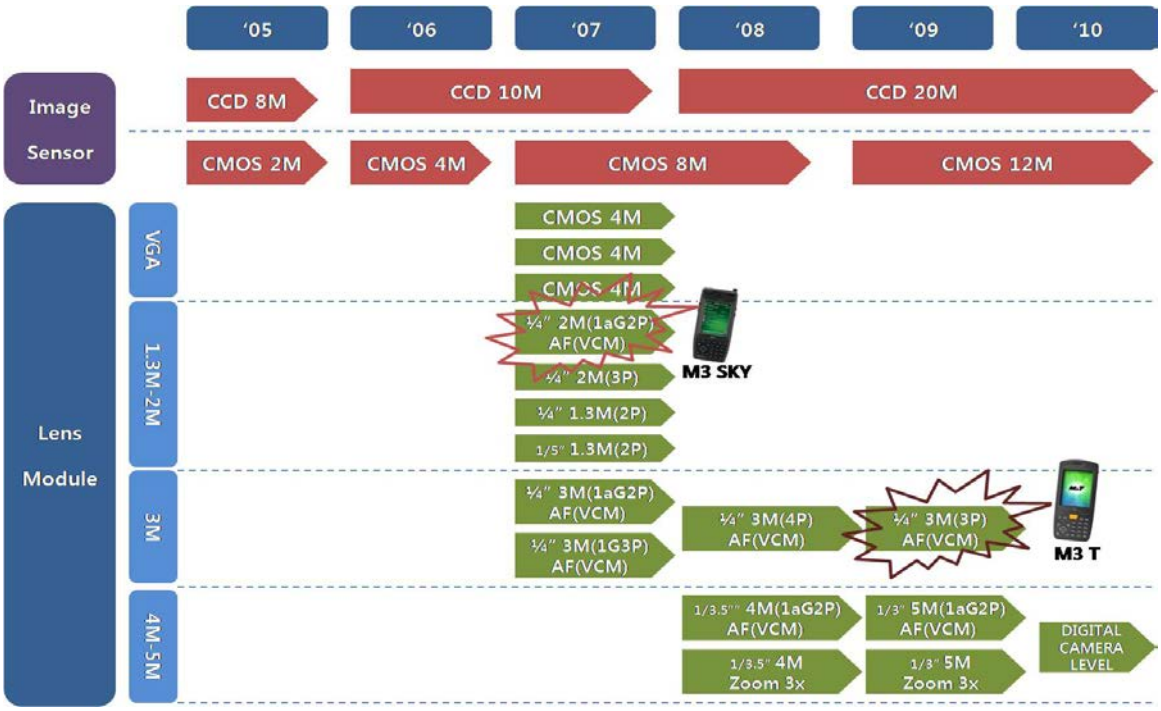
## 5-2. High Resolution 3M Pixels AF(Auto Focus) Camera

### ■ Camera Technology Leadership

Camera capability is an essential functionality for the industrial devices. Users in work force and warehouses can capture the pictures as the evidences on the spot.
M3 T MC6700S can support 3.0 Mega pixels Auto Focus Camera with high luminance LED Flash.
Auto Focus functionality in M3 T can capture the vivid images as imformation and evidences for the documentation.




**M3MOBILE Camera Technical Road-map**

### ■ Picture Capture for the evidences

• Documentation of Damaged items

: Managers can capture damaged items for the documentation as picture evidences on the spot.

• Documentation of Outdated freight

: In case that there are outdated freight in the warehouse, Manager can have the specifice evidences by capturing the freight.

**Picture: The documentation of Damaged items**

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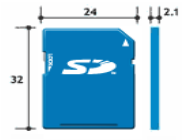
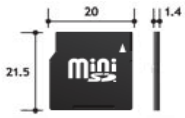
## 5-3. Advanced Extended Memory Technology: Micro SD

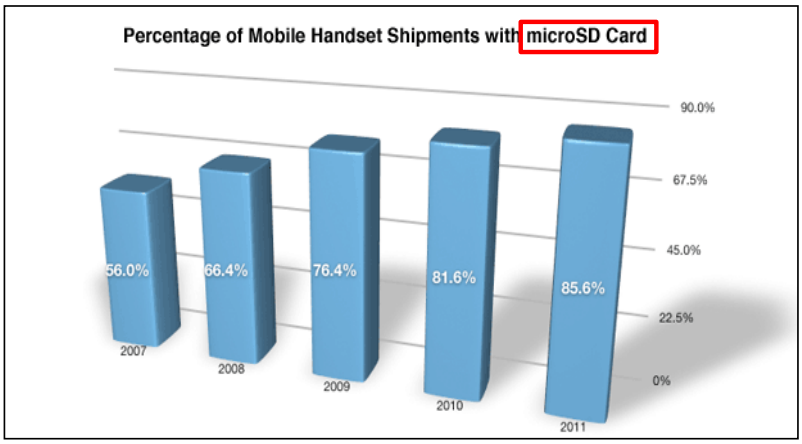
■ M3 T MC6700S has been adopted with new Micro SD Technology. Micro SD can have the reduced small size comparing to SD Card with the same data storage capacity. .
M3T has SDHC technology in Micro SD to support 32GB Maximum storage capability.

※ SDHC(Secure Digital High Capacity) : SD technology can not read and store more than 2GB file, but SDHC technology can support more than 2GB file.

**The Size Advantages of Mircro SD**

| Name | SD CARD | MINI SD CARD | MICRO SD CARD (T-Flash) | Remark |
|---|---|---|---|---|
| Image |  |  | | |
| weight | 2g | 1g | 0.5g | |

■ The trend of extension memory card
According to iSupply Data Flash Market Tracker survey, Micro SD card is mega trend for mobile devices. In 2011, 86% of the mobile devices can support the Micro SD card as a extension memory card for mobile devices.




**Source : iSuppli Data Flash Market Tracker - 2008**

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## 5-4. Full Support of WLAN (IEEE 802.11 a/b/g) Technology

### ■ WLAN: IEEE 802.11 a/b/g

M3 T MC6700S can support the WLAN IEEE 802. 11 a/b/g fully. WLAN IEEE 802. 11 a is using 5GHz frequencies for 5Mbps transmit speed. 5GHz band can not interfere wireless devices such as cellular phone(2.1GHz), Bluetooth(2.4GHz) in comparison with 2.4GHz frequencies of IEEE 802. 11 b/g.

### ■ Case study of M3 T WLAN IEEE 802. 11 a/b/g in Magna Chip

Magna chip company is utilizing the M3 T MC6700S in the semiconductor manufecturing line because of M3 T WLAN IEEE 802.11 a function.
In case of Magna Chip semiconductor, WLAN IEEE 802.11 a with 5GHz is a crutial funtionality. The equipments in semiconductor manufecturing
line is using 2GHz~2.4GHz(IEEE 802. 11 b/g band). Therefore in the Magna Chip company, the industrial handheld device with WLAN IEEE 802. 11 b/g module should not be used due to interference issues.

**The equipments using 2GHz~2.4GHz**

**WLAN IEEE 802.11 a : 5GHz**

**Picture: M3 T in Magna Chip Semi conductor**

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### 5-5. IP65 Full-ruggedness

- **IP65:** Perfect protection against dust and foreign object (No-ingress of dust)
- **IP65:** Protection against water jets

**[Dust Protection Test]** **[Hazardous Material Invasion Test]** **[Water Protection Test]**

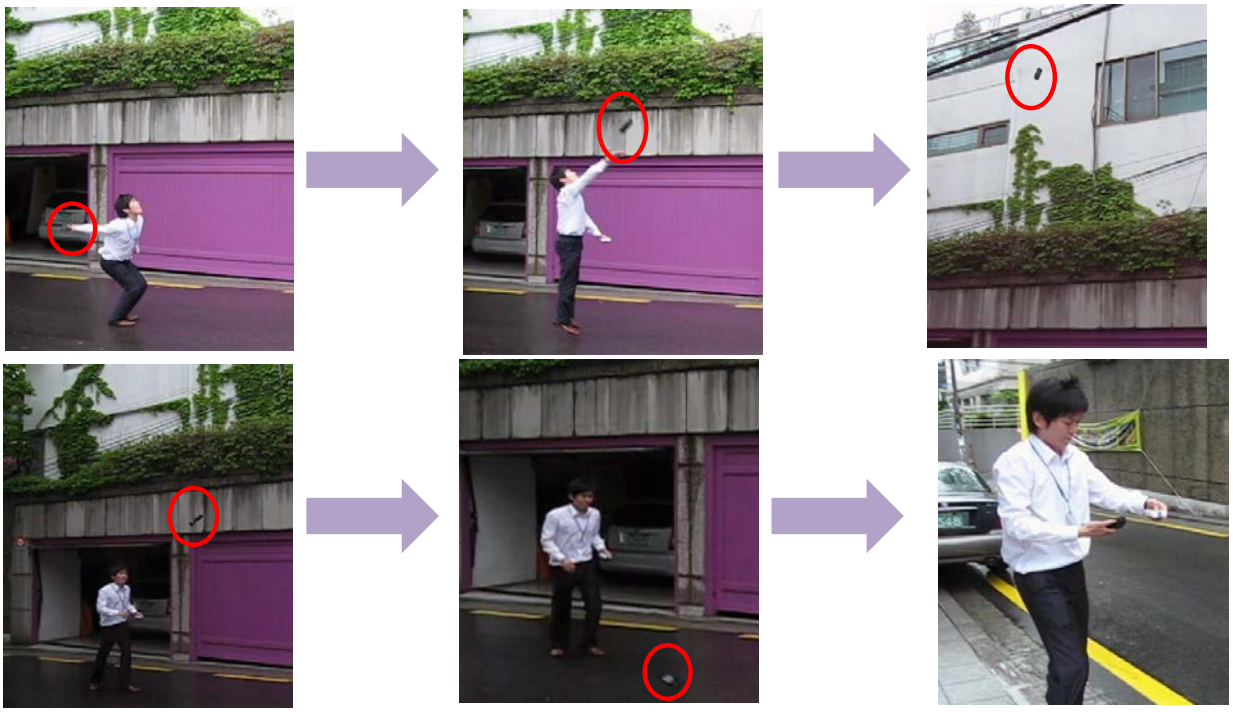
**Picture: IP Reliability Test**

### 5-6. 1.8M DROP Full-ruggedness

■ M3 T has passed 1.8M drop test of 2 drops per 6 surfaces to the steel in KTL(Korea Testing Laboratory). After the 1.8M drop test, M3 T was fully opperated normaly. It means that M3 T can be durable in any accidental drop by users in tough circumstance.

**Picture: Drop Test**

**Picture: M3 T Intensive Drop test**



■ M3 T has passed 1.8m Drop test. In addition to the 1.8M Drop test, M3 did the more intensive drop test by throwing M3 T in the sky onto the concrete road. After this rough test, M3 T was working in normal way. This means M3 T can endure the drop by user's mistake from the high ladder in the huge warehouse.

Please refer to the below URL to download the related video.

http://www.m3mobile.net/product/m3t.php

http://www.youtube.com/user/TheM3mobile#p/u/0/825YHSul16k

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**5-7. M3 SKY MC-6700S Comparative Test**

<table>
<tr><th colspan="2" rowspan="2">FEATURE</th><th>M3 Mobile</th><th>Motorola</th><th>Bluebird</th><th>Casio</th></tr>
<tr><th>MC-6700S</th><th>MC75</th><th>BIP6000</th><th>DT5300</th></tr>
<tr><td rowspan="10">ADVANTAGE</td><td rowspan="2">CPU</td><td>PXA320<br>806MHz</td><td>PXA270<br>624 MHz</td><td>PXA320<br>806 MHz</td><td>PXA320<br>624 MHz</td></tr>
<tr><td colspan="4">o Benchmark CPU performance test program showed MC-6700S scored 30% higher than MC75, DT5300.</td></tr>
<tr><td>O/S</td><td>WIN CE 5.0</td><td>WM 6.1</td><td>WM 6.1</td><td>WIN CE 6.0</td></tr>
<tr><td rowspan="2">MEMORY<br>(RAM/ROM)</td><td>256/256MB</td><td>128/512MB</td><td>128/512MB</td><td>128/128MB</td></tr>
<tr><td colspan="4">o BOOT Speed: 150% faster than MC75 and BIP6000, 10% faster than DT5300.<br>o Hard Reset: 400% faster than other brands' PDA.<br>O SD to Flash or Flash to SD file copying speed is over 200% faster than MC75 and BIP6000, and 10% faster than DT5300.</td></tr>
<tr><td rowspan="2">WLAN</td><td>a/b/g</td><td>a/b/g</td><td>b/g</td><td>b/g</td></tr>
<tr><td colspan="4">o MC-6700S and MC75 supports WLAN IEEE 802.11 a.<br>o MC-6700S showed 10~50% faster data transfer rate than MC75, and 20~70% faster than DT5300S.<br>o Coverage area of IEEE802.11 b/ g of MC-6700S showed similar range to MC75 and DT5300.</td></tr>
<tr><td rowspan="2">CAMERA</td><td>3.0MP</td><td>2.0MP</td><td>3.0MP</td><td>2.0MP</td></tr>
<tr><td colspan="4">o Camera initializing time is 30% faster than MC75.</td></tr>
<tr><td rowspan="2">SCANNER</td><td>Symbol(S/W)</td><td>Symbol(H/W)</td><td>HHP(2D)</td><td>Opticon(1D)</td></tr>
<tr><td colspan="4">o MC75 showed the slightly better performance in overall scanner performance. MC-6700S scaored the second then Casio the third.<br>o MC-6700S showed the best in reading speed (10% faster)<br>* BIP6000 is excluded in the comparison since it has 2D imager.</td></tr>
<tr><td colspan="2" rowspan="2">GPS</td><td>Yes</td><td>Yes</td><td>N/A</td><td>N/A</td></tr>
<tr><td colspan="4">o MC75 showed slightly better performance in GPS access speed (around 10%) but MC-6700S showed better in sensitivity (around 10%).</td></tr>
</table>

| | | | | |
|---|---|---|---|---|
| Battery performance | 2700 / 4800mA | 3600mA | 4400mA | 1850mA |
| | o Current comsumption: MC-6700S consumes 30% higher than DT5300, 5% less than MC75, 25% less than BIP6000<br>o Operating Time (standard battery): MC-6700S can last 25% longer than MC75, 30% longer than BIP6000, 30% longer than DT5300 | | | |
| Weight | 378g / 540g | 422g / 446g | 407g | 335g |
| Drop | 1.8m | 1.5m | 1.8m | 1.5m |
| IP | IP65 | IP54 | IP65 | IP54 |
| Operating Temperature | -20~60℃ | -10~50℃ | -20~55℃ | -20~50 ℃ |
| Keypad | N 29Key | N26/Q44Key | N 32Key | N 26Key |

## 9. Symbology Barcode for MC6700S

### 1) 1D Barcode

| Symbology | Enable Bar Code | Symbology | Enable Bar Code |
|---|---|---|---|
| CODABAR | | CODE 128 | |
| CODE 93 | | CODE 39 | |
| CODE39 CheckDigit Verification | | CODE39 FULL ASCII | |
| CODE32 | | CODE35 | |
| CODE25 MATRIX | | CODE25 DATALOGIC | |
| CODE25 INDUSTRY | | CODE25 IATA | |
| CODE11 | | PLESSEY | |
| EAN-8 | | EAN 13 | |
| BOOKLAND-EAN | | EAN-13 Add-On2 | |
| EAN-13 Add-On5 | | GS1 | |

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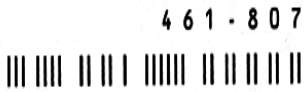
| Symbology | Enable Bar Code | Symbology | Enable Bar Code |
|---|---|---|---|
| GS1_LIMITED | | GS1_EXPANDED | |
| GS1_STACKED | | GS1_EXPANDED _STACKED | |
| UCC/EAN 128 | | UPC-A | |
| UPC-A | | UPC-A Add-on2 | |
| UPC-A Add-on5 | | UPC-E | |
| 3 of 5 |   | Interleaved 2 of 5 | |
| I2Of5 Check Digit Verification | | ITF-14 | |
| ISBN | | MSI | |
| TRIOPTIC | | PZN | |
| TELEPEN_OLD | | TELEPEN_ALPHA | |

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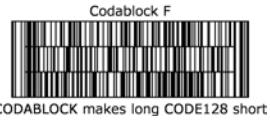
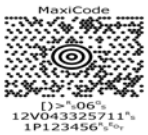
**2) 2D Barcode**

| Symbology | Enable Bar Code | Symbology | Enable Bar Code |
|---|---|---|---|
| 4-CB (4-State Customer Barcode) | | ISBT 128 | |
| Australian Post | | Code 16K | |
| Aztec Code | | Code 32 Pharmaceutical (PARAF) | |
| Aztec Mesas | | Code 49 | |
| British Post | | Composite Symbology | |
| Canadian Post | | Data Matrix | |
| Codablock F |  | Japanese Post | |
| EAN-13 (including Bookland EAN) | | KIX (Netherlands) Post | |
| ID-tag (UPU 4-State) | | MaxiCode |  |
| PDF417 | | MicroPDF417 | |
| Planet Code | | Postnet | |

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